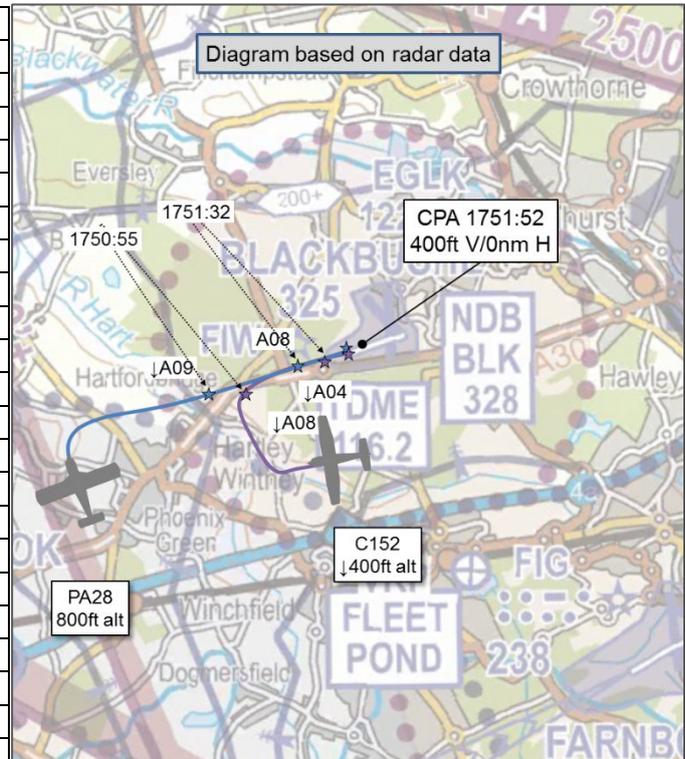


AIRPROX REPORT No 2019037

Date: 24 Feb 2019 Time: 1751Z Position: 5119N 00051W Location: Blackbushe

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C152
Operator	Civ FW	Civ FW
Airspace	Blackbushe ATZ	Blackbushe ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Blackbushe	Blackbushe
Altitude/FL	800ft	400ft
Transponder	A, C, S	A, C, S
Reported		
Colours		White, Yellow
Lighting	Strobes, Landing	Strobes, Landing
Conditions	VMC	VMC
Visibility	10km	>10km
Altitude/FL	600ft	100ft
Altimeter	QFE	QFE
Heading	070°	070°
Speed	80kt	65kt
ACAS/TAS	Not fitted	Unknown
Separation		
Reported	500ft V/500m H	Not seen
Recorded	400ft V/0nm H	



THE PA28 PILOT reports that he was No2 in the Blackbushe circuit behind an aircraft that had joined deadside for RW07. The aircraft ahead extended their downwind leg and so the PA28 pilot also extended behind him. When he turned finals, still as No2, he saw a C152 on base-leg turn final in front of him, so he initiated a go-around. ATC also made it clear to the C152 that there was another aircraft on final. The runway was occupied so the C152 was not able to land and also had to conduct a go-around, at which point he was below the PA28. The PA28 pilot moved to the deadside and overtook the C152, maintaining 500ft as he did so. After landing he discussed the incident with the C152 pilot who said he saw them but didn't know they were on final.

He assessed the risk of collision as 'Low'.

THE C152 PILOT reports that he was advised that he had been involved in an Airprox two weeks after the event. He recalled he was on finals to land on RW07, the aircraft ahead was slow to clear the runway, so he initiated a go-around and called '[C/S] going around' on the radio. The Blackbushe FISO informed him that there was an aircraft above him and in response he stopped his climb and flew level at about 150ft and asked the FISO to advise when he was clear of it. He could not see the other aircraft due to the high-wing of his Cessna. He was then told it was safe to continue the climb.

THE BLACKBUSHE AGCSO reports that the PA28 pilot joined the circuit from the north and reported downwind. The C152 pilot also joined from the north behind the PA28. Upon establishing downwind the C152 pilot was not visual with either the PA28 or the aircraft further ahead on finals. This aircraft reported conducting a long landing with the intention to vacate at taxiway 'A', so the PA28 positioned on a long final to allow spacing between the aircraft. The C152 pilot was then observed turning onto an early base leg (he believed), and turned final ahead of the PA28. The PA28 pilot was visual with the C152 and reported going around. The C152 continued with the runway still occupied, he was told the runway was occupied on several occasions. On short finals, having been told again that the runway was occupied, the C152 pilot reported going around. He was observed to increase his rate of climb.

considerably, with the PA28 on a steady gentle climb also on the go-around. The C152 pilot was informed about the PA28 directly above at which point he stopped climbing and flew level on runway heading, allowing the faster PA28 to pass ahead. Once visual, the C152 pilot allowed adequate spacing for both aircraft to land safely from the following circuit.

Factual Background

The weather at Farnborough was recorded as follows:

METAR EGLF 241750Z 20001KT CAVOK 10/01 Q1035=

Analysis and Investigation

UKAB Secretariat

Figures 1 and 2 are radar screenshots taken from the NATS radar. Figure 1 shows the PA28 on an extended final as the C152 begins his base leg turn. By Figure 2, the C152 has turned ahead of the PA28, at a range of 0.5nm and the two aircraft continue on final approach.

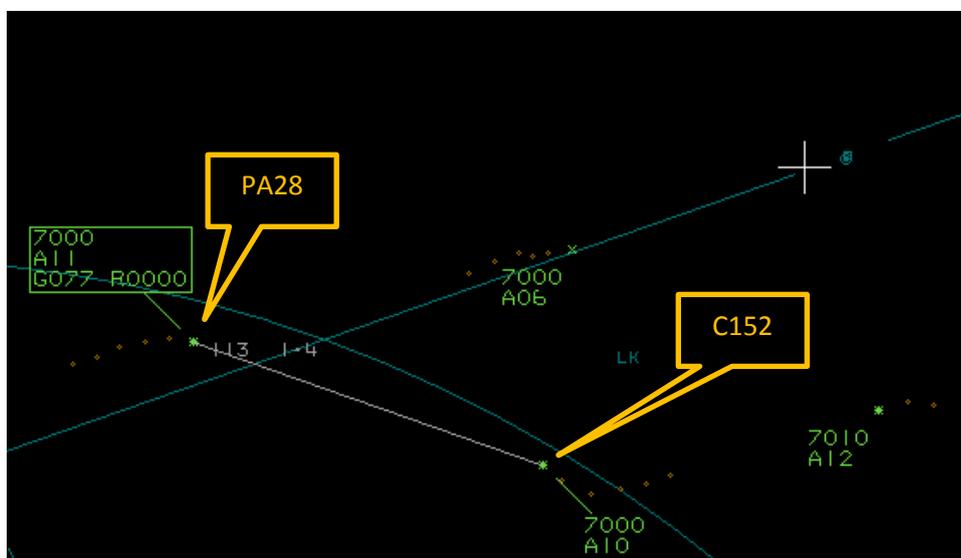


Figure 1

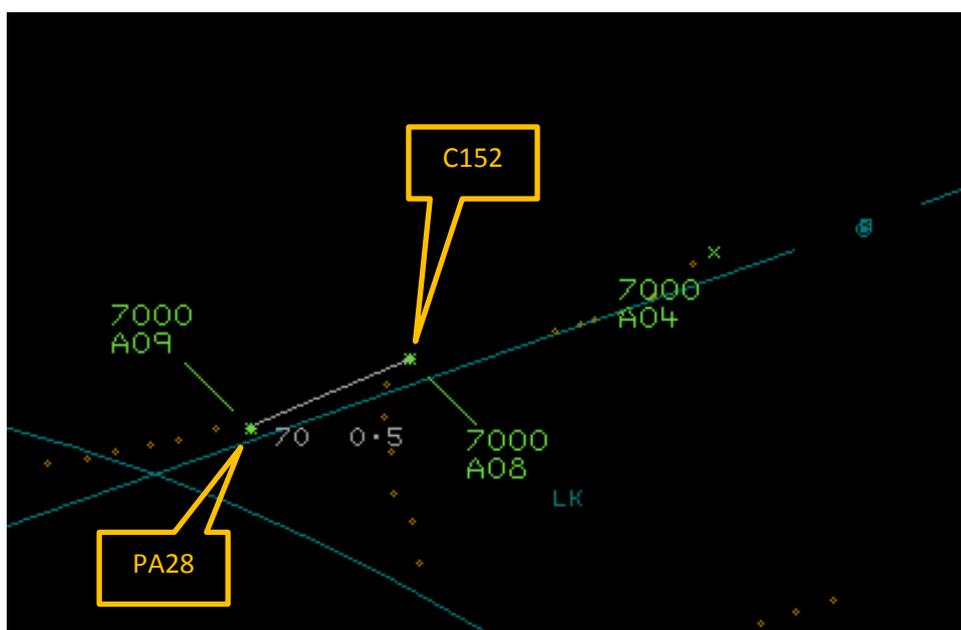
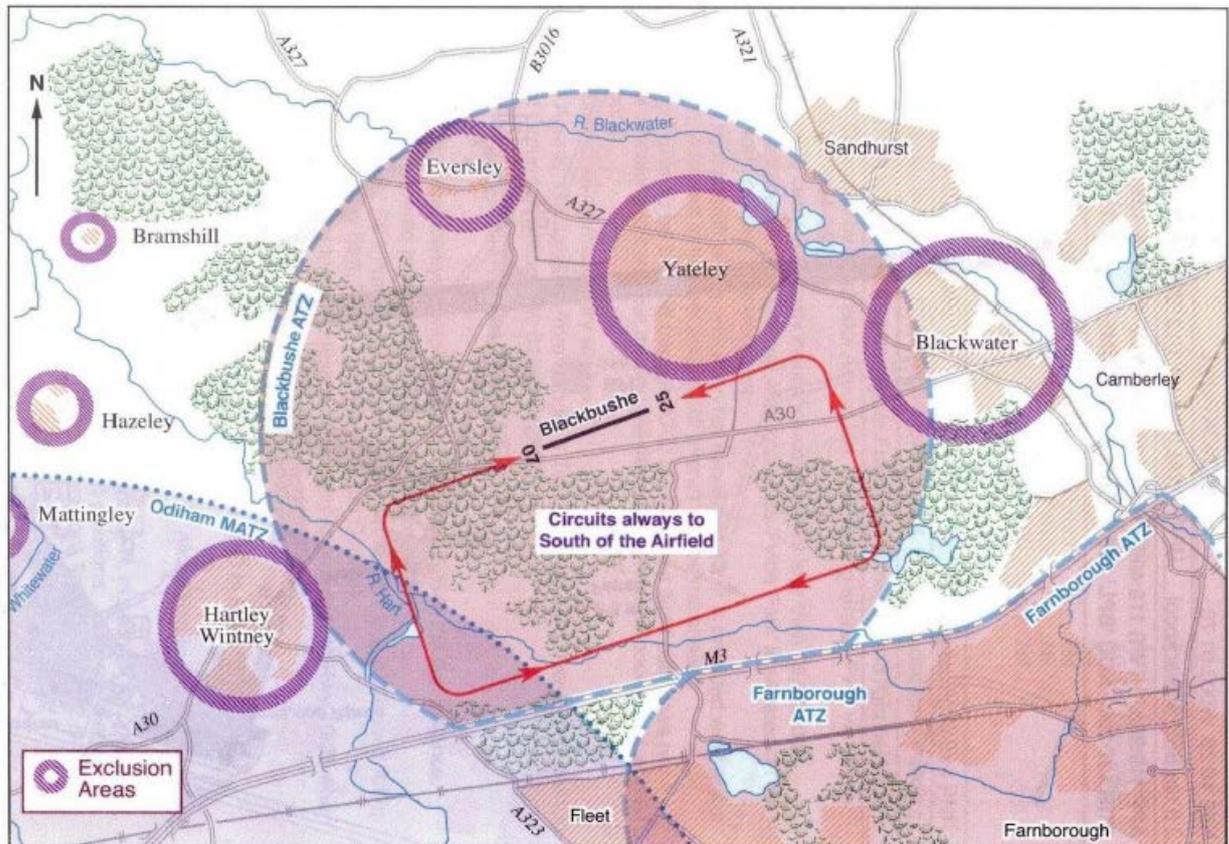


Figure 2

The Rules and Procedures published on the Blackbushe website state that:

6.3. The correct circuit procedure must be complied with, see the below Circuit Diagram.



7.6. To minimise the impact of noise on our neighbours:

- > Circuits should closely follow the diagram above
- > Avoid overflying housing estates
- > Make early allowances for drift
- > Don't extend finals unless necessary for safety reasons
- > Avoid low approaches

The PA28 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. When two or more aircraft approach an aerodrome for the purpose of landing, the aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another aircraft in the final stages of an approach².

Summary

An Airprox was reported when a PA28 and a C152 flew into proximity in the Blackbushe visual circuit at 1751hrs on Sunday 24th February 2019. Both pilots were operating under VFR in VMC, and both were in receipt of an AGCS from Blackbushe.

¹ SERA.3205 Proximity.

² SERA. 3210 Right-of-way.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings, an in-cockpit video from the PA28 and a report from the AGCSO involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board were greatly aided by being able to view the in-cockpit recording from the PA28 pilot as they first looked at his actions. He had extended his circuit pattern in order to follow the aircraft in front, who had also extended. The Board cautioned against doing this, it increases the risk that other pilots don't see your aircraft on finals (as in this case) and the circuit has the potential to become ever bigger. Instead, members recommended that pilots go around and re-position to follow the standard pattern if someone extends ahead of them. Nevertheless, having extended, GA members thought that a non-standard call of 'long finals' would have been advisable when the PA28 pilot saw the C152 turn in front because this might then have alerted the C152 pilot to his position (**CF2**). Having seen the C152 turn ahead of him on finals, the Board noted that the PA28 was visual with it at all times and some members thought that he should have gone around at an earlier stage, others felt that it was fine to continue as he did because there was always the chance that the C152 would go around early and he might still get his approach in. Nevertheless, all members agreed that when he did eventually go around he would have been better placed by having moved further over to the deadside in order to ensure he didn't conflict with the C152 if it also subsequently went around. A member familiar with Blackbushe commented that a noise-avoid on the upwind end of the deadside meant that the circuit was very constrained and that that was probably the reason why the PA28 pilot flew the go-around as it he did. Nevertheless, many members felt that the lack of a positive move further to the deadside had contributed to the Airprox and, following a robust discussion and a vote, the Board agreed that the PA28 pilot had had full situational awareness and could have done more to avert the Airprox (**CF5**).

Turning to the C152 pilot, the Board wondered whether he had heard the PA28 pilot's calls earlier in the circuit and why he had not assimilated that it was ahead of him in an extended circuit (**CF3**). Some members thought that the Blackbushe procedures, which discouraged extended circuits, probably lulled him into thinking that there was unlikely to be anyone behind the aircraft that he could see ahead of him on short final. Whenever turning onto final it is prudent to always properly scan up the approach lane first. The Board noted that the C152 pilot had said to the PA28 pilot after the event that he had seen him but didn't know the PA28 was on final; members opined that a call on the R/T would have established the PA28 pilot's intentions (he had right of way), before the C152 pilot turned in ahead of him (**CF1, CF2**). Once he had turned ahead of the PA28, the Board noted that the C152 had no knowledge that it was going around behind him, and could not see it above him as he commenced his overshoot, until the AGCSO warned him about it (**CF4**).

For his part, the Board commended the A/G operator for warning the C152 that the PA28 was above him as he also went around; members could not be sure that the PA28 pilot was visual with the C152 at that time and the A/G operators call meant that the C152 pilot certainly stopped his climb and prevented the situation from deteriorating.

The Board also wished to highlight the actions of the first pilot who extended his circuit and then remained on the runway to taxi to the end. They commented that it was his actions that had set off the chain of events that led to the Airprox: the PA28 pilot extended his circuit behind him and, having turned in front of the PA28, the C152 was not able to land because of the aircraft on the runway. Repeating their warning about the inadvisability of extending circuits downwind, they also noted that the Rules of the Air³ stated that aircraft must move clear of the landing area as soon as possible after landing unless authorised by Air Traffic Control; this was intended to avoid pilots from rolling to the end of the runway lest they baulk other aircraft on the approach, as in this case.

The Board then discussed the risk of the Airprox and quickly agreed that there was no risk of collision because the PA28 pilot was always visual with the C152. In light of this, some members thought that

³ Rules of the Air 2015 Section 3 Landing and taking off 10.(3)

the separation had been such that this was Category E, normal procedures and safety standards pertained. However, other members thought that because the C152 pilot had not integrated with the PA28 as he turned base leg, and because during his go-around the PA28 pilot had not acted sufficiently to move away from the C152, safety had been degraded. In the end the latter view prevailed and the Board assessed the risk as Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	• Tactical Planning and Execution		
2	Human Factors	• Insufficient Decision/Plan	Inadequate plan adaption
	• Situational Awareness of the Conflicting Aircraft and Action		
3	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, or late Situational Awareness
	• See and Avoid		
4	Human Factors	• Monitoring of Other Aircraft	Non-sighting by one or both pilots
5	Human Factors	• Lack of Action	Pilot flew into conflict

Degree of Risk: C.

Safety Barrier Assessment⁴

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **effective** because although the AGCSO was not required to provide deconfliction advice, he had provided a timely and effective warning to the C152 about the PA28 above him.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the C152 pilot did not integrate with the PA28 on long final.

Tactical Planning and Execution was assessed as **partially effective** because the PA28 pilot extended his circuit pattern and did not sufficiently move onto the deadside, and the C152 pilot did not query the PA28's presence on final when he turned final himself.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the C152 pilot had not assimilated that the PA28 was on long-final.

⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

See and Avoid were assessed as **ineffective** because the PA28 pilot did not move further over to the deadside on his go around, and the C152 was not visual with the PA28.

